FIG. 1

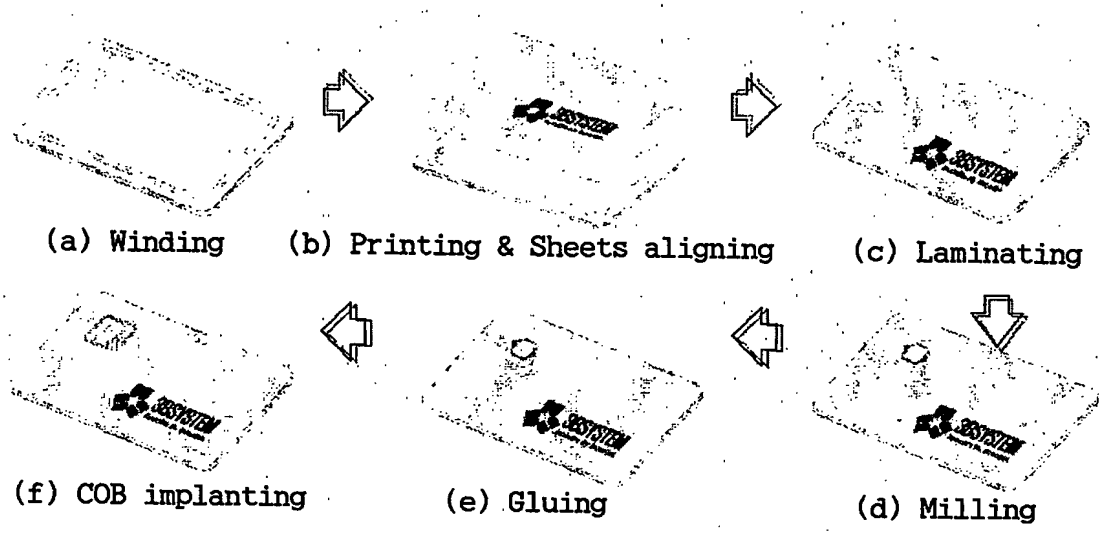

(a) Winding
(b) Printing & Sheets aligning
(c) Laminating
(d) Milling
(e) Gluing
(f) COB implanting

FIG. 2

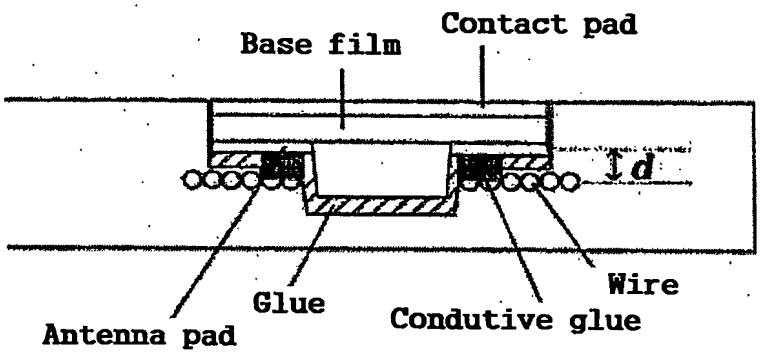

Base film
Contact pad
d
Wire
Glue
Condutive glue
Antenna pad

FIG. 3

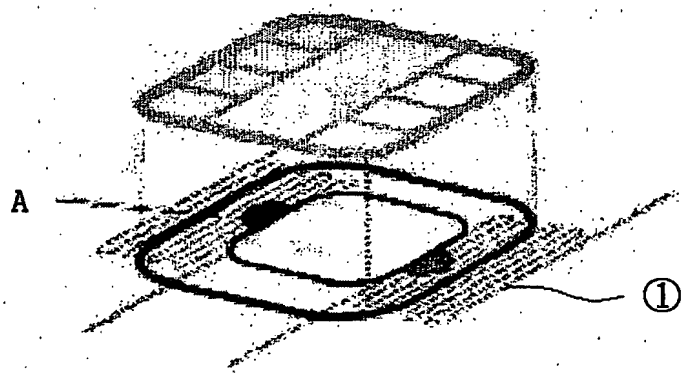
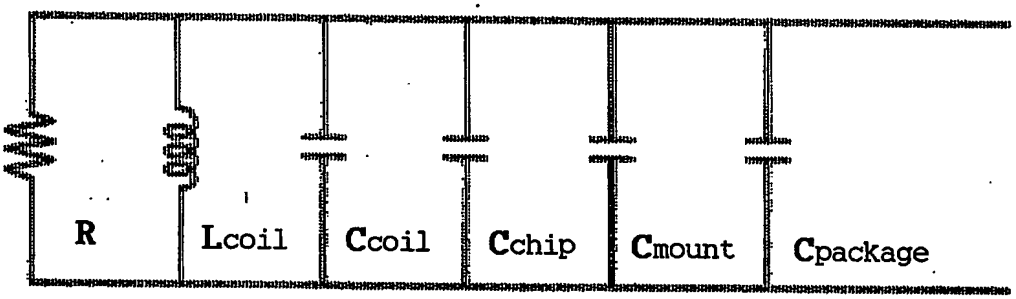

A
①

FIG. 4a

$$C_{mount} = \varepsilon_0 \varepsilon_r \frac{A}{d} \quad \text{(Eq.1)}$$

$$f_0 = \frac{1}{2\pi\sqrt{L_{coil}\left(C_{chip} + C_{coil} + C_{mount} + C_{package}\right)}} \quad \text{(Eq.2)}$$

FIG. 4b



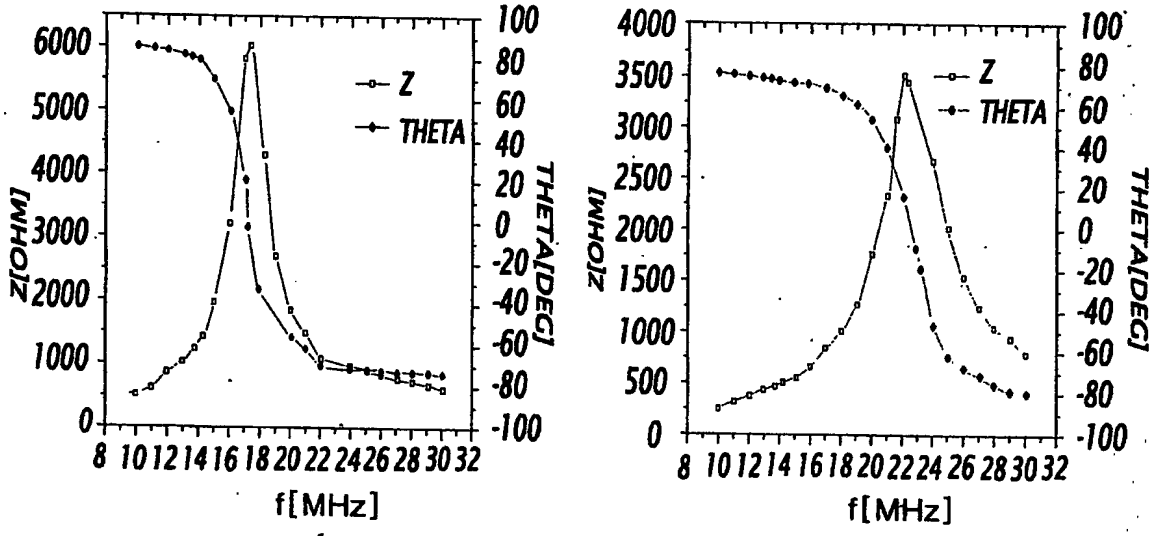
EQUIVALENT CIRCUIT OF THE CONVENTIONAL SMART CARD OF A COMBINATION TYPE

FIG. 5a

MEASUREMENT VALUE(AVERAGE)	Δd	f_o	D
BEFORE TESTING	0	17.3MHz	80mm
AFTER TESTING	9μm	22.8MHz	62mm

TABLE FOR RESULT MEASURED BEFORE AND AFTER A BENDING TEST

FIG. 5b



(a) BEFORE TESTING (b) AFTER TESTING

GRAPH OF IMPEDANCE-FREQUENCY CHARACTERISTICS IN THE CONVENTION SMART CARD OF A COMBINATION TYPE

FIG. 6

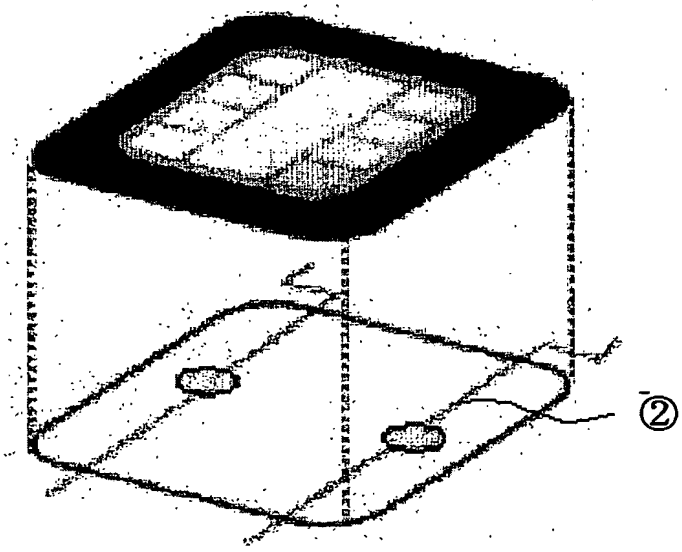
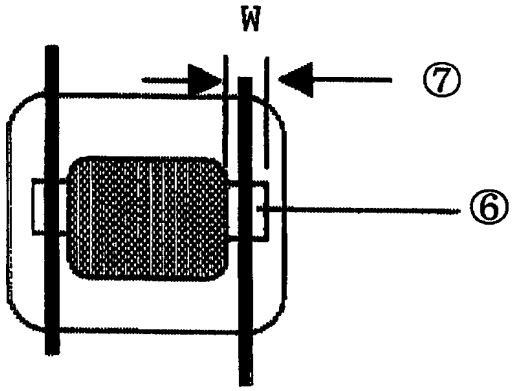


FIG. 7



ONE EMBODIMENT OF CONTACT PORTIONS BETWEEN A COB AND ENDS OF AN ANTENNA IN A SMART CARD OF A COMBINATION TYPE ACCORDING TO THE PRESENT INVENTION

FIG. 8

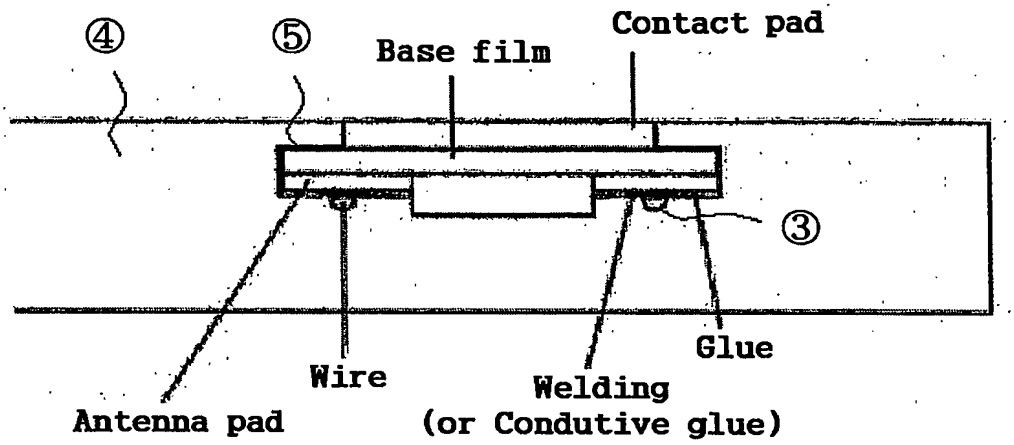
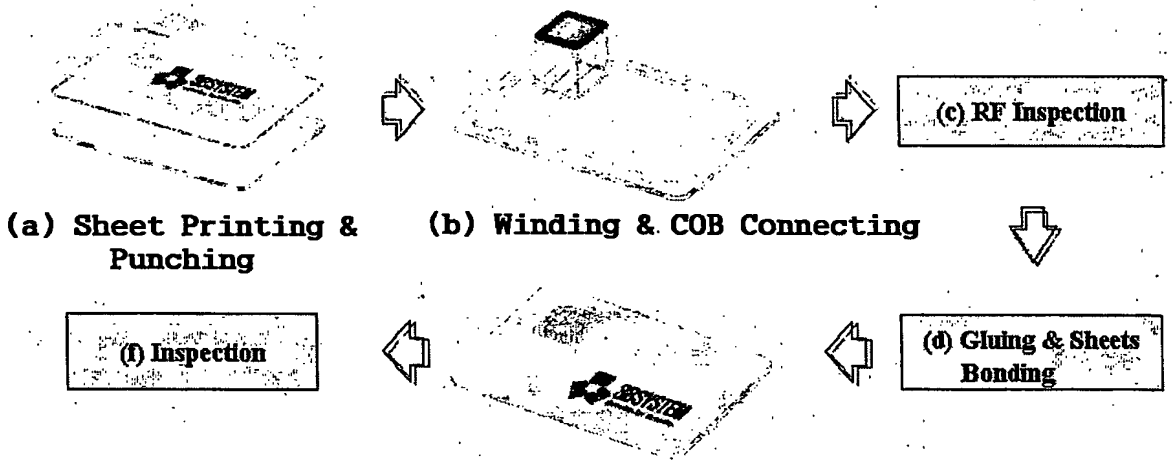

④
⑤
Base film
Contact pad
③
Glue
Wire
Welding
(or Condutive glue)
Antenna pad

FIG. 9


(a) Sheet Printing & Punching
(b) Winding & COB Connecting
(c) RF Inspection
(d) Gluing & Sheets Bonding
(e) Laminating & Card Punching
(f) Inspection